

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for allocating channels for radio data calls comprising:

receiving a data call connection request;

determining a traffic attribute of the data call;

determining an occupied bandwidth of each of a plurality of channels of a transmission link occupied by other connected calls; and

dynamically allocating the data call among the plurality of channels based on the traffic attribute and the occupied bandwidth, wherein a mobile switching system subtracts an occupied channel bandwidth from a maximum allowable channel bandwidth to determine whether there is a minimum available bandwidth in each channel, and allocates the channel having the least occupied bandwidth ~~if when~~ no channel has the minimum available bandwidth and allocates the channel having the least available bandwidth when a channel exists having the minimum available bandwidth.

2. (Original) The method of claim 1, wherein a bandwidth of the data call is determined based on the traffic attribute and the bandwidth occupied by the other connected

data calls is determined based on a number of other data calls and prescribed weight values of each of the other data calls.

3. (Original) The method of claim 2, wherein the weight value is allocated in a unit form according to a rate of the bandwidth.

4. (Original) The method of claim 3, wherein a bandwidth of 13Kbps-based low speed data call comprises 1 unit, a bandwidth of 64Kbps-based middle data call comprises 5 units, and a bandwidth of 128Kbps-based high speed data comprises 10 units.

5. (Canceled)

6. (Currently Amended) The method of claim 1, wherein the maximum allowable bandwidth is 30 units.

7. (Currently Amended) A method for allocating channels for radio data calls comprising:

receiving a data call connection request;

determining a traffic attribute of the data call;

determining an occupied bandwidth of each of a plurality of channels of a transmission link occupied by other connected calls; and

dynamically allocating the data call among the plurality of channels based on the traffic attribute and the occupied bandwidth, wherein a mobile switching system allocates a channel having the ~~least~~ largest available bandwidth ~~if~~ when a requested bandwidth of the data call is greater than a prescribed bandwidth and the channel having an available bandwidth exists and the mobile switching system allocates a channel having the least occupied bandwidth when the requested bandwidth of the data call is greater than the prescribed bandwidth and the channel having the available bandwidth does not exist.

8. (Currently Amended) A method for allocating channels for radio data calls comprising:

receiving a data call connection request;

determining a traffic attribute of the data call;

determining an occupied bandwidth of each of a plurality of channels of a transmission link occupied by other connected calls; and

dynamically allocating the data call among the plurality of channels based on the traffic attribute and the occupied bandwidth, wherein a mobile switching system allocates a channel having the ~~least occupied~~ available bandwidth ~~if~~ when a requested bandwidth of the data call is smaller than a prescribed reference bandwidth and the channel having an available

bandwidth exists and the mobile switching system allocates a channel having the least occupied bandwidth when the requested bandwidth of the data call is smaller than the prescribed reference bandwidth and the channel having the available bandwidth does not exist.

9. (Original) The method of claim 1, wherein the traffic attribute is determined based on a service option.

10. (Original) The method of claim 1, wherein the channels are H_0 channels and the transmission link is an E1 link.

Claims 11-13. (Canceled)

14. (Currently Amended) A channel allocation method for radio data calls, comprising:

receiving a data call connection request;

allocating an available time slot and an E1 link;

determining a requested bandwidth based on a service option of a received data call;

defining a weight value of the data call in accordance with the requested bandwidth;

dynamically allocating an H_0 channel on the E1 link based on a number of connected data calls occupying each of a plurality of H_0 channels and the weight value of each connected data call, wherein allocating the H_0 channel comprises:

determining whether the requested bandwidth is greater than a reference bandwidth;

computing a bandwidth occupied by the connected data calls;

subtracting the occupied bandwidth from a maximum allowable bandwidth for each H_0 channel, to determine whether any available bandwidth exists in each H_0 channel;

allocating an H_0 channel having the least occupied bandwidth if no H_0 channel exists;

allocating a H_0 channel having the ~~least~~largest available bandwidth if the requested bandwidth is greater than the reference bandwidth and a H_0 channel having available bandwidth exists; and

allocating a H_0 channel having the ~~least occupied~~available bandwidth if the requested bandwidth is smaller than the reference bandwidth and a H_0 channel having available bandwidth exists.

Claims 15-25. (Canceled)

26. (New) The method of claim 14, wherein allocating an H_0 channel having the least occupied bandwidth if no H_0 channel exists includes:

allocating a H_0 channel having the least occupied bandwidth if the requested bandwidth is greater than the reference bandwidth and an H_0 channel having available bandwidth does not exist.

27. (New) The method of claim 14, wherein allocating an H_0 channel having the least occupied bandwidth if no H_0 channel exists includes:

allocating an H_0 channel having the least occupied bandwidth if the requested bandwidth is smaller than the reference bandwidth and an H_0 channel having available bandwidth does not exist.

28. (New) The method of claim 7, wherein the mobile switching system allocates a channel having the least occupied bandwidth if the requested bandwidth is smaller than the reference bandwidth and a channel having available bandwidth does not exist.

29. (New) The method of claim 7, wherein the mobile switching system allocates a channel having the least available bandwidth if the requested bandwidth is smaller than the reference bandwidth and a channel having available bandwidth does exist.

30. (New) The method of claim 8, wherein the mobile switching system allocates a channel having the least occupied bandwidth if the requested bandwidth is greater than the reference bandwidth and a channel having available bandwidth does not exist.

31. (New) The method of claim 8, wherein the mobile switching system allocates a channel having the largest available bandwidth if the requested bandwidth is greater than the reference bandwidth and a channel having available bandwidth does not exist.